

PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Docket No: Q88723

Yasuo MIZOTA

Appln. No.: 10/540,552

Group Art Unit: 1791

Confirmation No.: 5361

Examiner: Geoffrey L. Knable

Filed: August 2, 2005

For: TIRE STRUCTURAL MEMBER FABRICATING METHOD AND APPARATUS FOR
CARRYING OUT THE SAME

REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.41, Appellant respectfully submits
this Reply Brief in response to the Examiner's Answer dated December 23, 2008. Entry of this
Reply Brief is respectfully requested.

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STATUS OF CLAIMS

Claims 1-6 are pending in the present application and stand finally rejected and are being appealed.

In the Final Office Action of May 15, 2008, the Examiner made the following rejections:

- Claims 1-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogawa et al. (U.S. 6,461,459; hereinafter “Ogawa”) in view of Marchini et al. (U.S. 6,702,913; hereinafter “Marchini”) and Hitotsuyanagi et al. (US 2002/0046796; henceforth “Hitotsuyanagi”).
- Claims 1-6 were rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious under Ohkubo (US 2003/0024627).

In the Advisory Action of July 28, 2008, the Examiner withdrew the rejections based on Ohkubo (US 2003/0024627) based on the arguments and statements set forth in the response under 35 U.S.C. § 1.116 filed July 15, 2008.

Claims 1-6 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogawa et al. (U.S. 6,461,459; hereinafter “Ogawa”) in view of Marchini et al. (U.S. 6,702,913; hereinafter “Marchini”) and Hitotsuyanagi et al. (US 2002/0046796; henceforth “Hitotsuyanagi”).

No other ground of rejection or objection is currently pending.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Rejection of claims 1-6 under 35 U.S.C. § 103(a) as being unpatentable over Ogawa in view of Marchini and Hitotsuyanagi.

ARGUMENT

Most of the arguments set forth in the Examiner's Answer mailed December 23, 2008 are dealt with fully in Appellant's Brief on Appeal, but Appellant requests that the following additional remarks be considered.

Rejection of Claims 1-6 under 35 U.S.C. § 103(a) as being unpatentable over Ogawa in view of Marchini and Hitotsuyanagi

In response to Appellant's arguments that Marchini teaches that the method used in Ogawa is flawed and must be replaced with the entirely different method, the Examiner asserts that Marchini neither explicitly nor even implicitly references a formation method as taught by Ogawa. Appellant respectfully notes that Marchini refers to document WO 99/17920 as describing a method and apparatus for manufacturing a belt layer by the successive application of strip like segments to the exterior surface of a toroidal support, which is made to rotate about its own geometric axis. *See* Col. 2, lines 44-64. Appellant further notes that Document WO 99/17920 is a patent application, which also lists Ogawa as inventor, which is plainly cited on the face of the Ogawa reference applied by the Examiner, and which, like Ogawa, involves the successive application of strip-like segments to a toroidal support, which is rotating about its own geometric axis.

Further, immediately after describing document WO 99/17920 in the background of invention section, Marchini states "that the laying of strip-like segments carried out according to **the teachings of the prior art does not bring about a perfect structural homogeneity in the**

reinforcing structure obtained thereby.” Further, Marchini also shows in Fig. 6 that “prior art” methods cannot address a problem discussed in therein. Appellant respectfully submits that these statements clearly reference the prior art references described in the background of invention section of Marchini, which includes document WO 99/17920. Thus, Appellant respectfully submits that a person of ordinary skill in the art would recognize this as reference to methods using the successive application of strip-like segments to a toroidal support, which is rotating about its own geometric axis as discussed in both document WO 99/17920 and the Ogawa reference applied by the Examiner.

Further, the Examiner asserts that Marchini identifies “fundamental geometric realities facing the ordinary artisan in forming a belt reinforcement structure using successively applied strips on a crowned drum...regardless of how these strips are applied”. Further, the Examiner asserts that Marchini provides the general solution of “varying angles across their width”, and this solution would be effective regardless of how the varying angles are achieved. MPEP 2141.03 (VI) states “A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Appellant respectfully submits that the Examiner’s arguments selectively (and with improper hindsight) choose portions of the Marchini reference, while wholly ignoring other portions, to support the asserted combination of references.

In this case, Marchini may recognize a problem caused by a geometry of a crowned drum, i.e., the length of the circumference at the equatorial plane will be longer than the length of the

circumferences at the lateral edges, making it “impossible to make each longitudinal edge of each segment match the longitudinal edge of adjacent segments” along the entire longitudinal edge. *See* Col. 9, lines 15-62. However, Marchini also teaches that prior art methods, (i.e., successive application of strip-like segments to a toroidal support rotating about its own geometric axis) cannot correct this issue. *See* Col. 10, lines 1-7. Instead, Marchini teaches that these problems have been solved by causing the toroidal support to rotate not about its geometric axis (X-X in Figs. 3-6), as discussed in WO 99/17920 and Ogawa, but about an axis of correction (Y-Y in Figs. 3-5), which is radial to the geometric axis of the toroidal support. *See* Col. 10, lines 9-34. In other words, Marchini teaches that methods similar to those described in Document WO 99/17920 and Ogawa, which involve successive application of strip-like elements to a toroidal support rotating about its geometric axis, cannot solve this problem. Appellant respectfully submits that the Examiner’s failure to take these teachings into consideration is clearly improper under MPEP 2141.03(VI).

Further, Appellant also notes that Marchini explicitly states that these problems are overcome by rotating the toroidal support about an axis of correction (Y-Y in Figs. 3-5), and Marchini does not provide any teaching or suggestion that other methods could also be used to overcome these problems. *See* Col. 10. Thus, Appellant also submits that the Examiner’s assertion that Marchini is applicable to “any suitable and effective manner of varying an angular path” is improper in light of the absence of any suggestion in Marchini that other methods may also work.

For at least the above discussed reasons, Appellant respectfully submits that a person of ordinary skill in the art would not apply the teachings of Marchini to methods involving successive application of strip-like elements to a toroidal support rotating about its own geometric axis, as described in Document WO 99/17920 and the Ogawa reference applied in this case by the Examiner.

Further, with respect to the teachings of the Hitotsuyanagi reference, the Examiner asserts that this reference is not cited for teaching any particular application path/pattern, but is instead merely evidence that it is understood to achieve varying angles by controlling only the speed of a drum during traverse of a feed device. Further, the Examiner asserts that the suggestion for “gently accelerating and decelerating” the drum indicates that the angle can be varied as desired.

However, Appellant notes that the present claims recite “angular velocity of the forming drum **varies gradually and continuously** from a minimum angular velocity at a moment a leading end of the strip is attached to the convex outer surface...”. Conversely, Hitotsuyanagi describes taking a drum from a stop to a particular velocity, holding the velocity constant, and then decelerating back to a stop. *See* Paragraphs [0112]-[0117]. Thus, Appellant respectfully submits that neither Hitotsuyanagi, nor any other applied reference, teaches or fairly suggests “angular velocity of the forming drum **varies gradually and continuously** from a minimum angular velocity at a moment a leading end of the strip is attached to the convex outer surface...” as claimed in claims 1 and 4.

CONCLUSION

For the reasons discussed above, as well as the reasons set forth in Appeal Brief of October 15, 2008, Appellant respectfully requests that the Board reverse the Examiner's rejections of all claims on Appeal. An early and favorable decision on the merits of this Appeal is respectfully requested.

Respectfully submitted,

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